

REMARKS/ARGUMENTS

The amendment made to Table 1 of the specification corrects a typographic error. The Examples referred to are within the present claims. The correction is supported by the description in Table 2 in page 60 of the present specification. Panel Nos. 3-5 uses a Shore D hardness within the claimed value (D80 to D97) and a correct Remark of "Inv.".

The newly added claim 21 is supported by the description of page 16, lines 11 to 15 of the present specification as follows.

"In the invention according to item (1), one of the features is that the surface of the calender roller, which comes into contact with said phosphor layer, is comprised of resin of a Shore D hardness of D80 to D97 degrees and more preferably from D90 to D95 degrees."

The superior effects obtained by using a roller having D90 to D95 are shown in Table 2, Panel Nos. 4 and 5.

The Examiner rejects claims 1 - 17 under 35 U.S.C. 103 as being unpatentable over Yanagita et al (USP 6242424) in view of Saito et al. (USP 4962578).

As described on page 7, lines 17 to 22, an object of the invention is:

"An object of the present invention is to provide a radiation image conversion panel which exhibit an excellent balance of luminance and sharpness, and in addition, minimal sharpness fluctuation, a production method thereof, and a radiation image capturing method using the same."

This object is achieved by using a calender roller having a Shore D hardness of D80 to D 97 as is required in Claim 1 of the present application. More preferably, the above-mentioned object can be achieved by a calender roller having a Shore D hardness of D90 to D 95 as is required in Claim 21 (new) of the present application.

Yanagita does not show or suggest a calender roller having a specific Shore D hardness of the present invention. The Examiner relies on Saito for this missing feature.

Saito discloses a roller having a Shore D hardness of D75 to D 97. However, Saito does not show or suggest that combining a roller with the shore D hardness described therein is expected to provide some special result. More specifically, it is not obvious to achieve the object of the present invention from the description in Saito. Saito discloses the reason to select having a Shore D hardness of D75 to D 97 as follows:

"If the hardness is lower than 75, a deformation degree of the resin is increased due to an operation pressure. As a result,

the interior of the resin is heated and broken." (Column 2, lines 65 to 68 of Saito) "if the hardness is lower than Shore D 97, deformation occurs on whole region of the roll, as a result, there is no problem. However, if the hardness is high (exceeding 97), deformation degree is small, and a portion of the roll receives the entire load. This causes an overload state for the roll, and the resin layer is broken." (Column 3, lines 11 to 17).

The above-described effects of the roller of Saito is only related to the physical strength of the roller itself. There is no teaching of the effect to which the roller is applied. Therefore, the effect of the present invention are unexpected and surprisingly high.

To one skilled in the art, it is not obvious to combine the technologies of Yanagita and Saito to achieve the effects of the present invention.

The Examiner rejects claims 2, 9-11 although Saito fails to describe or suggest the crown value as well as the surface roughness.

Saito discloses a technology to avoid local heat generation by using a crown-controlled roller as is described in column 3, lines 20 to 28.

"In general, if a roll coated with a hard resin is operated at high rotational speed in a high load state, local heat

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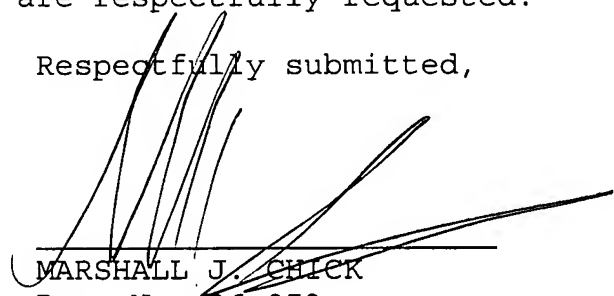
generation occurs. If the temperature of a metal roll contacting the resin roll is high, this phenomenon is noticeable. In order to prevent this, in super calendering, crown-controlled rolls (swimming rolls) are used as upper and lower metal rolls, so that a uniform pressure is applied to the entire surface of the roll."

However, Saito only discloses general aspect of the effect of a crown-controlled roller. Saito does not teach a roller having a specific crown value of the claims of the present invention is efficient to achieve the effect of the present invention. Moreover, no examples using a crown-controlled roll are disclosed in the experimental part of the specification of Saito. Thus, Saito fails to show or suggest how to achieve the present invention. Wakamatsu is cited in combination with Yanagita and Saito. However, Wakamatsu fails to provide the missing teaching distinguishing the present invention from the combined teaching in the art.

In view of the above, withdrawal of the rejections and allowance of the application are respectfully requested.

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Enc. Check for \$18.00 for one extra dependent claim